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IS 1750 (1995): Dead burnt pea magnesite [MTD 15: Refractories]



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भारतीय मानक

निस्तापित मैग्नेसाइट का दाना — विशिष्टि

(तीसरा पुनरीक्षण)

Indian Standard

**DEAD-BURNED PEA MAGNESITE —
SPECIFICATION**

(Third Revision)

UDC 666.762.32-187

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BUREAU OF INDIAN STANDARDS
MANAK BHAVAN, 9 BAHADUR SHAH ZAFAR MARG
NEW DELHI 110002

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Price Group 1

FOREWORD

This Indian Standard (Third Revision) was adopted by the Bureau of Indian Standards, after the draft finalized by the Refractories Sectional Committee had been approved by the Metallurgical Engineering Division Council.

This standard was first published in 1961 and subsequently revised in 1977 and 1983. While reviewing the standard in the light of experience gained during these years, the Committee decided to revise it to bring it in line with the present practices being followed by the Indian Industry.

In the present revision, the following changes have been made:

- a) One more grade of the dead-burned pea magnesite has been added.
- b) Physical test for bulk density has been included.

Dead-burned magnesite, commercially known as magnesite clinker, is obtained from the raw magnesite after sintering it in a suitable kiln. Pea magnesite is so named because, after sintering the magnesite clinker is crushed and graded to conform to pea size. Pea magnesite is used for making monolithic hearths and in the ramming mixtures for furnace lining.

For the purpose of deciding whether a particular requirement of this standard is complied with, the final value, observed or calculated, expressing the result of a test or analysis, shall be rounded off in accordance with IS 2 : 1960 'Rules for rounding off numerical values (*revised*)'. The number of significant places retained in the rounded off value should be the same as that of the specified value in this standard.

Indian Standard

DEAD-BURNED PEA MAGNESITE — SPECIFICATION

(Third Revision)

1 SCOPE

This standard covers the requirements for dead-burned pea magnesite used in steel plants.

2 REFERENCES

The following Indian Standards are the necessary adjuncts to this standard:

<i>IS No.</i>	<i>Title</i>
1387 : 1993	General requirements for the supply of metallurgical materials (<i>second revision</i>)
1528	Methods of sampling and physical tests for refractory materials
(Part 7) : 1974	Methods of sampling and criteria for conformity (<i>first revision</i>)
(Part 9) : 1980	Determination of the true specific gravity and true density (<i>second revision</i>)
(Part 12) : 1974	Determination of bulk density (<i>first revision</i>)
1760	Methods of chemical analysis of limestone, dolomite and allied materials
(Part 1) : 1991	Determination of loss on ignition (<i>first revision</i>)
(Part 2) : 1991	Determination of silica (<i>first revision</i>)

(Part 3) : 1991 Determination of iron oxide, alumina, calcium oxide and magnesia (*first revision*)

4041 : 1987 Glossary of terms relating to refractory materials

3 TERMINOLOGY

For the purpose of this standard, the definitions given in IS 4041 : 1987 shall apply.

4 SUPPLY OF MATERIAL

4.1 General requirements relating to the supply of dead-burned pea magnesite shall be as laid down in IS 1387 : 1993.

4.2 The material shall be completely dead-burned with the least hydration tendency.

5 CHEMICAL COMPOSITION

The material shall comply with the requirements of Table 1 when analysed in accordance with relevant parts of IS 1760.

6 PHYSICAL CHARACTERISTICS

When tested in accordance with the methods given in relevant parts of IS 1528, the material shall conform to the requirements given in Table 2.

Table 1 Chemical Composition
(Clause 5)

Sl No.	Characteristics	Requirements			Method of Test (Refer to Part of IS 1760)
		Grade 1	Grade 2	Grade 3	
(1)	(2)	(3)	(4)	(5)	(6)
i)	MgO, percent, <i>Min</i>	88	85	85	Part 3
ii)	SiO ₂ , percent, <i>Max</i>	5.5	6.5	4.0	Part 2
iii)	CaO, percent, <i>Max</i>	1.5	1.5	3.0	Part 3
iv)	Fe ₂ O ₃ , percent, <i>Max</i>	3.0	4.0	5.0	Part 3
v)	Loss on ignition percent, <i>Max</i>	1.0	1.0	1.0	Part 1

Table 2 Physical Characteristics
(Clause 6)

Sl No.	Characteristics	Requirements			Method of Test (Refer to Part of IS 1528)
		Grade 1 (3)	Grade 2 (4)	Grade 3 (5)	
(1)	(2)				(6)
i)	Bulk Density g/cm^3 , <i>Min</i>	3.20	3.15	3.10	Part 12
ii)	Sp. Gravity, <i>Min</i>	3.48	3.46	3.45	Part 9

7 SIZE GRADING

The size grading shall be as agreed to between the supplier and the manufacturer.

8 SAMPLING AND CRITERIA FOR CONFORMITY

Representative samples shall be drawn according to the scheme of sampling given in IS 1528 (Part 7) : 1974 and criteria for conformity given in the above standard shall be followed.

9 PACKING

Unless specified otherwise, the material shall be supplied in jute bags containing 50 kg.

10 MARKING

10.1 Each bag of dead-burned pea magnesite shall be legibly and indelibly marked with the manufacturer's name or trade-mark.

10.2 BIS Certification Marking

The material may also be marked with the Standard Mark.

10.2.1 The use of the Standard Mark is governed by the provisions of Bureau of Indian Standards Act, 1986 and the Rules and Regulations made thereunder. The details of conditions under which the licence for the use of Standard Mark may be granted to manufacturers or producers may be obtained from the Bureau of Indian Standards.

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Amendments Issued Since Publication

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